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ENVIRONMENTALLY SOUND MANAGEMENT OF TOXIC CHEMICALS: OPTIONS FOR AGENDA 21

Report of the Secretary-General of the Conference

I. INTRODUCTION

1. This paper was prepared by the Secretariat in response to the decision No. 2/17 of the Preparatory Committee at its second session in which the Secretary General of the Conference was requested "... to elaborate for its third session, the potential areas for action proposed in the progress report, A/CONF.151/PC/35, which would form the framework for an international strategy for environmentally sound management of toxic chemicals" and, in doing so, to take into account a series of specific issues as listed in paragraph 2 of the decision.

2. As already elaborated upon in the background paper (A/CONF.151/PC/74) "Environmentally Sound Management of Toxic Chemicals" is related to many other sectors being dealt with in the UNCED preparatory process such as human health, agriculture, oceans, freshwater, atmosphere, land resources, biodiversity and hazardous wastes.

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3. A substantial use of chemicals is essential to meet the social and economic goals of the world community and today's best practice demonstrates that they can be widely used, cost effectively, and with a high degree of safety. However, a great deal remains to be done to extend the environmentally sound management of toxic chemicals, to undo the mistakes of the past, and to harness the carefully chosen use of chemicals to the causes of sustainable development and an improved quality of life in every country and every community across the globe. One of the major problems to tackle is the lack of sufficient scientific information for the assessment of risks of a great number of chemicals. Another problem is the lack of resources to assess chemicals for which data are at hand.

4. Other problems are related to the fact that the introduction of chemicals and of chemically-related industries in developing countries, which as yet lack the infrastructure and trained human resources for chemical safety, is often carried out on a far from environmentally-sound basis.

5. Gross chemical contamination, with grave damage to human health and the environment, has continued in recent times in some of the world's most important industrial areas. Restoration will require major investments and development of new techniques. The importance of long-range transport of pollution, with effects which can extend even to the fundamental chemical and physical processes of the Earth's atmosphere and climate, is only recently becoming understood.

6. A considerable number of international bodies are involved in work on chemical safety. In many countries work-programmes for the promotion of chemical safety are in place. Such work has international implications as chemical risks do not respect national boundaries. However, a significant strengthening of both national and international efforts is needed in order to achieve an environmentally sound management of chemicals.

7. At its Second Session the Preparatory Committee for UNCED invited WHO, UNEP and ILO, within the framework of the International Programme on Chemical Safety (IPCS), in co-operation with FAO and other relevant organizations, to report on ongoing work carried out through appropriate government expert meetings concerning possible proposals for an intergovernmental mechanism for chemical risk assessment and management.

8. Moreover, the Governing Council of UNEP, at its 16th Session, requested the Executive Director to prepare, in co-operation with the Secretariat of UNCED, WHO, ILO, OECD, EEC and other relevant organizations, draft proposals for an intergovernmental mechanism for risk assessment and management of chemicals. In addition, the Governing Council requested the Executive Director, subject to the availability of resources, to convene in consultation with the executive heads of ILO and WHO, within the context of the collaboration under IPCS, and in co-operation with OECD, CEC, the Secretary-General of UNCED and other relevant international organizations, a meeting of government-designated experts to consider the draft proposals and, in consultation with the executive heads of ILO and WHO and through the appropriate channels, to submit to the Preparatory Committee for UNCED at its fourth Session a report on the outcome of the meeting. The government-designated experts meeting is expected to be held in December 1991.

9. The following proposals for programmes for improving assessment and management of chemical risks represent urgent needs irrespective of the establishment of an intergovernmental mechanism for chemical risk assessment and management. Such a mechanism could increase the possibility of cost-effective solutions.

II. OPTIONS FOR AGENDA 21

OVERALL OBJECTIVES

10. Beneficial use of chemicals for sustainable development with minimum risks to health and the environment.

11. Adoption of strategies for environmentally sound management of chemicals in each country not later than the year 2000 with implementation as soon as possible thereafter.

PROPOSED PROGRAMME AREAS

12. The following major programme areas are proposed as options for consideration by the Preparatory Committee.

a. Expanding and accelerating the international assessment of chemical risks.

b. Harmonization of classification and labelling of chemicals

c. Information exchange on toxic chemicals

d. Establishment of risk reduction programmes

e. Strengthening of national capabilities and capacities for management of chemicals

There is a close interrelationship between the programme areas. For example, assessment of chemical risks is essential to information exchange and risk reduction.

A. EXPANDING AND ACCELERATING THE INTERNATIONAL ASSESSMENTAOFRISKS

Basis for Action

13. The assessment of risks to human health and environment that a chemical may cause is a prerequisite to planning for its safe and beneficial use. Out of the approximately 100,000 chemical substances in commerce and the thousands substances of natural origin which human beings come into contact, many substances appear as pollutants and contaminants in food, commercial products and the various environmental media. Fortunately the exposure to most chemicals is rather limited as most are used in very small amounts. Some 1500 chemicals cover over 95 per cent of the total world production. But a serious problem is that even for a great number of high volume production chemicals, crucial data for risk assessment are often lacking.

14. Risk assessment is resource-intensive. it could be made cost-effective by strengthening international co-operation and better coordination, thereby making best use of available resources and avoiding unnecessary duplication of efforts.

Objective

15. Strengthening of international risk assessment. About 500 priority chemicals or groups of chemicals, including major pollutants and contaminants of global significance, could have been assessed by the year 2000 using current selection and assessment criteria.

Activities

16. Relevant international organizations with active participation of governments and industry could:

- Strengthen and expand programmes on chemical risk assessment within the United Nations system (IPCS: UNEP, ILO, WHO), based on agreed approach to data quality, assurance, application of assessment criteria, peer review and linkages to risk management activities.

- Produce guidelines for acceptable exposure for a greater number of substances, based on peer review and scientific consensus.

- Review strategies for assessment of exposure and environmental monitoring to allow for the best use of available resources, to ensure compatibility of data and to encourage coherent national and international strategies for exposure assessment.

- Promote mechanisms to increase collaboration amongst government, industry, academia and relevant NGOs, involved in the various aspects of risk assessment of chemicals and related processes, in particular promoting and coordinating research activities to improve understanding of the mechanisms of action of toxic chemicals.

- Improve methods for assessment of chemicals and improve procedures for using toxicological and epidemiological data to predict the effects of chemicals on human health and the environment, in order to enable decision makers to adopt adequate policies and measures to reduce hazards posed by chemicals.

- Develop criteria for priority-setting of chemicals of global concern for assessment.

- Validate alternative methods to those using test animals, thus reducing the use of animals for testing purposes.

- Promote relevant epidemiological studies with a view to establishing a cause-effect relationship between exposure to chemicals and the occurrence of certain diseases.

- Generate data necessary for assessment with the active participation of industry.

B. HARMONIZATION OF CLASSIFICATION AND LABELLING OF CHEMICALS

Basis for Action

17. Adequate labelling of chemicals, based on assessed risks to health and environment, is the simplest and most efficient way of indicating how to handle and use chemicals safely.

18. For the safe transport of dangerous goods, including chemicals, a comprehensive scheme elaborated within the UN system is in current use. This scheme takes mainly into account the acute hazards of chemicals.

19. Globally harmonized classification and labelling systems are not yet available to promote the safe use of chemicals at the workplace, in the home,etc. Classification of chemicals can be made for different purposes and is a particularly important tool in establishing labelling systems.

20. The International Labour Conference has given ILO a mandate to undertake, within the framework of IPCS and in consultation with other concerned bodies, the process of harmonizing existing classification systems.

Objective

21. A globally harmonized classification and labelling system including easily understandable symbols should be in place by the year 2000.

Activities

22. International bodies active in the chemical safety area could establish a coordinating group to:

- Make comparative studies of existing classification and labelling systems as a starting point for establishing general principles for a globally harmonized system.

- draft proposals for standardization of hazard communication terminology and symbols in order to enhance risk management of chemicals, facilitate international trade and make it easier to translate the information into the end user's language.

- elaborate a harmonized classification and labelling system.

23. Governments and relevant international organizations could:

- Finalize and establish a harmonized classification and labelling system.

C. INFORMATION EXCHANGE ON TOXIC CHEMICALS

Basis for action

24. The London guidelines are addressed to governments with a view to assisting them in the process of increasing chemical safety in all countries through the exchange of information on chemicals.

25. The export to developing countries of chemicals which have been banned in one or more countries or whose use has been severely restricted in some industrialized countries has been the subject of concern as some importing countries lack the ability to assure safe use, due to inadequate government infrastructure for controlling the availability, storage, formulation and disposal of chemicals.

26. In order to address this issue provisions for Prior Informed Concent (PIC) procedures were introduced in 1989 in the " London Guidelines for the exchange of information on chemicals in International Trade" (UNEP/IRPTC) and in the "International Code of Conduct on the Distribution and Use of Pesticides" (FAO). In addition a joint FAO/UNEP programme has been launched for the operation of the PIC procedures for chemicals including the selection of chemicals to be included in the PIC procedure and preparation of PIC decision guidance documents. The ILO chemicals convention calls for communication between exporting and importing countries when hazardous chemicals have been prohibited for reasons of safety and health at work.

Objective

27. Intensified exchange of information on chemical safety between all involved parties

28. Full implementation of the Prior Informed Consent procedure contained in the amended London Guidelines and in the FAO International Code of Conduct by the year 2000.

Activities

29. Governments of countries exporting chemicals could:

- provide knowledge and information on restricted or banned chemicals to importing countries to enable them to judge and take decisions on whether to import and how to handle these chemicals and establish joint responsibilities in trade of chemicals between importing and exporting countries.

- Provide technical assistance and information to other countries, especially those with shortages of technical expertise, including training in the interpretation of relevant technical data, e.g. data provided through the FAO/UNEP joint programme on PIC (Decision Guidance Documents) and those submitted by industry or by other sources.

D. ESTABLISHMENT OF RISK REDUCTION PROGRAMMES

Basis for Action

30. There are often alternatives to hazardous chemicals currently in use. Thus risk reduction can sometimes be achieved by using other chemicals or even non-chemical methods. The classical example of risk reduction is the substitution of harmless or less harmful substances for harmful ones. Setting

standards for chemicals in each environmental media, food, consumer goods, etc, is another example of risk reduction. In a wider context risk reduction involves international approaches to reduce the risks of selected chemicals taking into account the entire life cycle of the chemicals. Such approaches could encompass both regulatory and non-regulatory measures including, inter alia, the promotion of the use of cleaner products and technologies, product labelling, use limitations, and the phasing out or banning of chemicals.

31. In the agricultural area, integrated pest management is one way of risk reduction.

32. Other areas of risk reduction encompass the prevention of chemical accidents, prevention of poisoning by chemicals and the undertaking of toxicovigilance.

Objective

33. To reduce risks posed by chemicals by using alternative chemicals and methods and taking precautionary measures.

Activities

34. Governments could:

- Adopt policies and legal frameworks and procedures to identify and minimize the use of the most hazardous chemicals, in particular those included in the PIC list.

- Carry out national reviews of earlier accepted pesticides and reviews of the possible substitution of other pest-control methods, particularly for pesticides which are toxic-persistent and/or bio-accumulative.

- Encourage national and regional work to harmonize evaluation of pesticides.

- Increase efforts to identify national needs for standard setting and implementation in the context of the FAO/WHO Codes Alimentarius in order to minimize adverse effects of chemicals in food.

- Develop national policies and adopt the necessary regulatory framework for prevention of accidents (land use, planning, permit systems, reporting requirements on accidents, etc.)

- Provide assistance in the development of chemical risk communication guidelines at the national level to promote information exchange with the public.

35. International organizations could:

- Formalize networks of emergency response centres.

- Promote technology that would minimize the use of hazardous chemicals and processes in all countries.

E. STRENGTHENING OF NATIONAL CAPABILITIES AND CAPACITIES FOR MANAGEMENT OF CHEMICALS

Basis for Action

36. Many countries lack national systems to cope with chemical risks. In several countries with systems in place there is an urgent need to make the systems more efficient.

37. Basic elements for national sound management of chemicals are: (i) adequate legislation; (ii) information gathering and dissemination; (iii) capacity for risk assessment and interpretation; (iv) establishment of risk management policy; (v) capacity for implementation and enforcement; (vi) capacity for rehabilitation of contaminated sites and poisened persons.

38. As management of chemicals takes place within a number of sectors, related to various national ministries, experience suggests that an interministerial coordinating mechanism is essential.

Objective

39. National systems for environmentally sound management of chemicals including legislation and provisions for implementation and enforcement should be in place in all countries by the year 2000.

Activities

40. International organizations could:

- prepare guidelines with advice and check lists for enacting legislation in the chemical safety field.

- Support developing countries to develop national legislation.

41. Governments could:

- Establish an interministerial coordinating mechanism, presided over by a senior member of the government, to provide liaison between all parties involved in chemical safety activities (e.g. agriculture, education, industry, labour, health, transportation, police, civil defense, economic affairs, research institutions, poison control centres).

- Direct information campaigns to the general public to increase the awareness of problems on chemical risks.

- Develop networks of emergency response centres, including poison control centres.

- Develop national and local capabilities to respond to accidents by use of the APELL programme and regularly tested and updated emergency plans.

- Organize training programmes regarding emergency response targeted at all levels of various constituencies.

- In cooperation with industry develop emergency response procedures, identifying necessary means and equipment in industries and plants to minimize impacts of accidents.

42. International organizations could:

- Arrange training courses to educate staff for work on chemical safety at all levels.

- Develop mechanisms to make maximum use in countries of internationally available information.